

STREAM CHANNEL STABILIZATION

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 584



STREAM CHANNEL STABILIZATION

Stream channel stabilization is using conservation structures to stabilize the channel of a stream.

PRACTICE INFORMATION

This practice applies to structural work done to control aggradation or degradation in a stream channel that cannot feasibly be controlled by clearing obstructions, establishing vegetation, or installing upstream water control structures.

Stream channels may aggrade or degrade during a given storm. This is natural and does not necessarily indicate the stream should be considered unstable. A channel is considered unstable when changes in the channel bottom are on a long term trend toward aggradation or degradation.

In the design of channel stabilization, the following should be considered as a minimum:

1. The objective of the planned modification to the channel.
2. Temporary and long-term effects on erosion and sedimentation.
3. Effects on wildlife associated with changes that may occur in the water temperature, turbidity, bottom geologic material, etc.
4. Effects on the visual quality of the stream.
5. The overall effects that may occur if the stream volume and/or velocity is changed by the planned structures.

Additional information including design criteria and specification are on file in the local NRCS Field Office Technical Guide.

The following pages contain the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

CONSERVATION PRACTICE PHYSICAL EFFECT WORKSHEET

NOTE: recorded in Microsoft word 6.0 - use tabs to change cells/fields

STATE	Iowa	FIELD OFFICE		DATE	12/5/96
PRACTICE: 584 Stream Channel Stabilization			NOTES:		
RESOURCE: SOIL RESOURCE CONCERN: EROSION			Help Message: Click on form field for choice lists. Tab key to move around. "N/A" is the default.		
RESOURCE INDICATORS			PHYSICAL EFFECTS		
SHEET AND RILL			N/A		
WIND			N/A		
EPHEMERAL GULLY			N/A		
CLASSIC GULLY			situational concerning classic gullies		
STREAMBANK			significant reduction in streambank erosion		
IRRIGATION INDUCED			N/A		
SOIL MASS MOVEMENT			significant reduction in mass movement of soil		
ROADBANK/CONSTRUCTION			situational concerning const./roadbank erosion		
OTHER					
RESOURCE CONCERN: SOIL CONDITION					
SOIL TILTH			N/A		
SOIL COMPACTION			N/A		
SOIL CONTAMINATION					
• SALTS			N/A		
• ORGANICS			N/A		
• FERTILIZERS			N/A		
• PESTICIDES			N/A		
• OTHER					
DEPOSITION/DAMAGE					
• ONSITE			moderate reduction/onsite deposition damage		
• OFFSITE			moderate decrease/offsite deposition damage		
DEPOSITION/SAFETY					
• ONSITE			moderately improve onsite safety/deposition		
• OFFSITE			moderately improve offsite safety hazard/depos.		
OTHER					
RESOURCE: WATER RESOURCE CONCERN: WATER QUANTITY					
SEEPS			N/A		
RUNOFF/FLOODING			situational concerning runoff and floods		
EXCESS SUBSURFACE WATER			N/A		
INADEQUATE OUTLETS			N/A		
WATER MGT. IRRIGATION					
• SURFACE			N/A		
• SPRINKLER			N/A		
WATER MGT. NON-IRRIGATED			N/A		
RESTRICTED FLOW CAPACITY (H2O convey.)					
• ONSITE			N/A		
• OFFSITE			N/A		
RESTRICTED STORAGE			sign. reduction in sedimentation of H2O storage		
OTHER					

RESOURCE: WATER	
RESOURCE CONCERN: WATER QUALITY	
RESOURCE INDICATORS	PHYSICAL EFFECTS
GROUNDWATER CONTAMINANTS	
• PESTICIDES	N/A
• NUTRIENTS AND ORGANICS	N/A
• SALINITY	N/A
• HEAVY METALS	N/A
• PATHOGENS	N/A
• OTHER	
SURFACE WATER CONTAMINANTS	
• PESTICIDES	N/A
• NUTRIENTS AND ORGANICS	N/A
• SUSPENDED SEDIMENTS	sign. reduction in SWater contam./susp. sedi.
• LOW DISSOLVED OXYGEN	N/A
• SALINITY	N/A
• HEAVY METALS	N/A
• WATER TEMPERATURE	situational concerning SWater contam./H2O temp.
• PATHOGENS	N/A
AQUATIC HABITAT SUITABILITY	situational concerning animal habitat suitability
OTHER	
RESOURCE: AIR	
RESOURCE CONCERN: AIR QUALITY	
AIRBORNE SEDIMENT AND SMOKE PARTICLES	
• ONSITE SAFETY	N/A
• OFFSITE SAFETY	N/A
• ONSITE STRUCT. PROBLEMS	N/A
• OFFSITE STRUCT. PROBLEMS	N/A
• ONSITE HEALTH	N/A
• OFFSITE HEALTH	N/A
AIRBORNE SEDIMENT CAUSING CONVEYANCE PROBLEMS	N/A
AIRBORNE CHEMICAL DRIFT	N/A
AIRBORNE ODORS	N/A
FUNGI, MOLDS, AND POLLEN	N/A
OTHER	
RESOURCE CONCERN: AIR CONDITION	
AIR TEMPERATURE	N/A
AIR MOVEMENT (windbreak effect)	N/A
HUMIDITY	N/A
OTHER	

[illegible]

RESOURCE: HUMAN	
RESOURCE CONCERN: SOCIAL CONSIDERATIONS	
RESOURCE INDICATORS	PHYSICAL EFFECTS
PUBLIC HEALTH AND SAFETY	sign. improvement in public health & safety
PRIVATE/PUBLIC VALUES	sign. improvement in private/public values
CLIENT CHARACTERISTICS	N/A
RISK TOLERANCE	N/A
TENURE	N/A
OTHER	
RESOURCE CONCERN: CULTURAL CONSIDERATIONS	
ABSENCE/PRESENCE OF CULTURAL RESOURCES	situational regarding cultural resources
SIGNIFICANCE OF CULTURAL RESOURCES	situational regarding cultural resources
MITIGATION OF NEGATIVE CULTURAL RES. IMPACTS	situational regarding cultural resources
OTHER	